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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,930	03/16/2004	Severine Catreux	16136US02	4709

7590 07/21/2009

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EXAMINER	
VLAHOS, SOPHIA	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
07/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/801,930	**Applicant(s)** CATREUX ET AL.	
	Examiner SOPHIA VLAHOS	**Art Unit** 2611	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 June 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *7-9, 11-13,19-21, 23-35, 37-39, 41, 42, 44*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Mohammad H Ghayour/
Supervisory Patent Examiner, Art Unit 2611

Continuation of 11. does NOT place the application in condition for allowance because: Applicant;s remarks received on 6/29/09 have been carefully considered but are not persuasive. Page 9 of "Remarks" section Applicant argues "Neither contemplates using weighting and combining both before and after upconverting"… "In other words, Fochini teaches weighting and combining only once. Kohno teaches weigthing and combining only once. So, even combined, the combined teachings of Foschini and Kohno is weighting and combining only once."

Examiner disagrees that the combined teaachings of Fochini and Konhno only weigh and combine only once. Fig. 1 combiner 111-1 for example performa a first combining in a baseband domain, and the modification of Foschini based on Kohno (Fig. 4 where S1 and S2 are upconverted signals) is seen to further disclose a second weighing and combining in the upconverted domain (as shown in Fig. 4 of Kohno et al.)

Applicant argues (page 10) that "there is no techincal underpining to combine Kohno and Foschini since the technical underpining given is applicable solely to Kohno and only to an invention that weighs and combines only once."

Examiner disagrees with Applicant's argument there is no techincal underpining to combine Kohno and Fochini.

The space-time transmit diversity system of Foschini is prior art for Kohno et al., see Kohno et al. column 1, lines 30-45, explains "Further, the correlation of the transmission signals due to the interference among beams has not been utilized actively to improve communication efficiency and to improve the quality of communication. Thus, in the case of transmitting and receiving signals by forming a plurality of beams, that is co-called space diversity, the interference among beams has almost always been suppressed as much as possible to suppress interference and the correlation of transmission signals has not been utilized effectively." Foschini discloses that if the transmitted signals have some degree of correlation, and such correlation is ignored, performance degrades and capacity is reduced. However, Kohno's innvention utilizes correlation to improce communication efficienty and to impitve the quality of communication.

Fig. 10 of Kohno et al. plots the BER vs. SNR of the prior art transmit diversity and the communication method of the present invention, (column 9, lines 56-61, column 10, lines 14-25). Assuming the Foschini transmit-diversity system has perfromance of the transmit-diversity graph, and the system of Kohno has the improved performance of the other graph, Examiner contends it would have been obvious to modify Foschini based on the teachings of Kohno et al. to effectively use correlation of transmission signals to obtain an improvement of the BER vs. SNR performance (or improve the reliability of the communication system, Kohno et al. column 6, lines 46-49).

On pages 11-15 Applicant has reproduced the arguments included in the response filed February 17, 2009. Examiner believes these arguments have been addressed in the section "Response to Arguments" of the Final Rejection Office Action, mailed on 4/27/09.